

The opinion in support of the decision being entered today was not written for publication and is not precedent of the Board.

Paper No. 40

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte BERNARD GRINDATTO, ALEX JOURDAN
and MARIE PRIN

Appeal No. 1997-2284
Application 08/278,107

HEARD: June 6, 2000

Before KIMLIN, OWENS and DELMENDO, *Administrative Patent Judges*.

OWENS, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal from the examiner's final rejection of claims 1 and 2. Claims 3, 8, 9, 13-15, 18 and 19, which are all of the other claims remaining in the application, have been indicated by the examiner as being allowable.

THE INVENTION

Appellants' claimed invention is directed toward a

carbide foam of an element selected from a recited Markush group, which is useful as a catalyst or catalyst support.

Claim 1 is illustrative and reads as follows:

1. Carbide foam of an element selected from the group consisting of Si, Mo, W, Re, V, Nb, Ta, Ti, Cr, Ni, rare earth elements and actinide elements, for use as a catalyst or catalyst support having open pores including macropores of a pore diameter between 50 and 500 Fm and mesopores of a pore diameter between 30 and 50 Angstroms in the form of a three-dimensional network of interconnected cages, a density between 0.03 and 0.1 g/cm³, a BET specific surface area between 20 and 100 M²/g, no more than 0.1% by weight residual said element and carbide crystallites of a size between 40 and 400 Angstroms.

THE REFERENCE

Welsh et al. (Welsh)	4,536,358	Aug. 20,
1985		

THE REJECTION

Claims 1 and 2 stand rejected under 35 U.S.C. § 103 as being unpatentable over Welsh taken with appellants' admitted prior art.

OPINION

We have carefully considered all of the arguments advanced by appellants and the examiner and agree with appellants that the aforementioned rejection is not well

founded. Accordingly, we reverse this rejection.

Welsh discloses a carbide foam which can be used as a catalyst or catalyst support, can contain the elements recited in appellants' claim 1, and has an internal pore surface area between about 1 and about 2000 m²/g (col. 2, lines 20-21 and 51-53; col. 3, lines 18-19; col. 6, lines 26-57). The admitted prior art relied upon by the examiner (answer, page 3) is appellants' acknowledgment that the starting polymer foams used to make their carbide foam are available commercially (specification, page 6).

The examiner argues that Welsh discloses a carbide foam having a surface area of 42 m²/g (col. 11, line 24) and that it would have been obvious to one of ordinary skill in the art to use a purchased carbon such as that used by appellants because doing so would provide the carbon required by Welsh (answer, page 3). The carbide foam which is disclosed as having a surface area of 42 m²/g, however, is not disclosed as having the pore sizes, density or low level of residual element and crystallites recited in appellants' claim 1.

The examiner argues that the carbiding reactions of appellants and Welch have the same mechanism and that the

claims require only two macropores and two mesopores which would be made by any practical process and would be essentially undetectable (answer, page 4). The examiner does not explain, however, why, even if two pores of each type necessarily are formed, the foam produced would have a density and a surface area within the ranges recited in appellants' claim 1. Nor does the examiner explain why Welsh would have led one of ordinary skill in the art to carry out the preparation of the carbide foam such that the combination of characteristics recited in appellants' claim 1 is obtained.

For the above reasons we conclude that the examiner has not carried the burden of establishing a *prima facie* case of obviousness of the invention recited in either of appellants' claims. Accordingly, the examiner's rejection is reversed.

DECISION

The rejection of claims 1 and 2 under 35 U.S.C. § 103 over Welsh taken with appellants' admitted prior art is reversed.

REVERSED

Appeal No. 1997-2284
Application 08/278,107

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EDWARD C. KIMLIN)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
TERRY J. OWENS))
Administrative Patent Judge)	APPEALS AND
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